CGM Report

Project Title : Campus Traverse

Problem Statement

A project using OpenGL to show a walk-in simulation through the campus of our college

Abstract

A project implemented using c++ and OpenGL in VisualStudio, aims at simulating the campus of our college.

The campus is visualized in a 3D perspective view with keyboard and mouse inputs for navigating through the campus. The campus portrayed is a sample of how the real campus looks however details such as paint color and building dimensions couldn't be accounted for.

Introduction

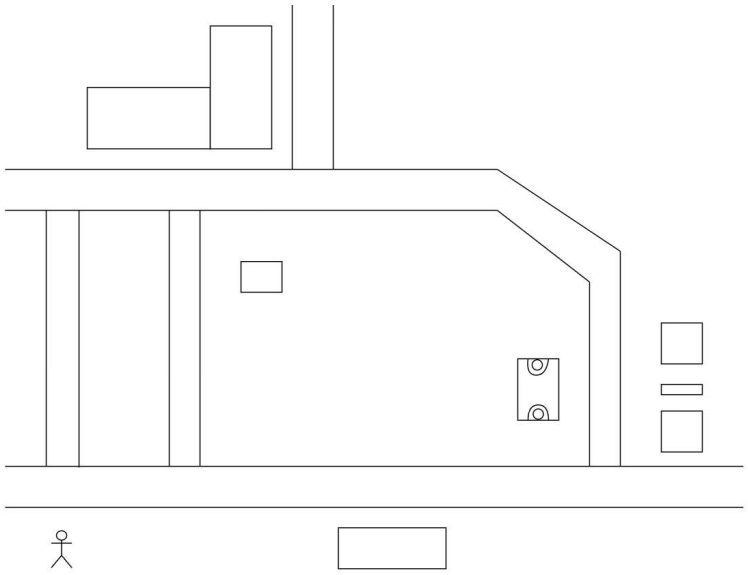
This project illustrates a simple traverse through our campus which includes the 3d buildings, trees and courts. This report outlines the methods used to visualize the Campus we are trying to achieve and also show result screenshots at the end of the report.

Methodology used

In this project, there are mainly 4 types of models that will be used to illustrate the campus. 4 models consist of buildings, trees, roads and courts.

Stages of making campus traverse project.

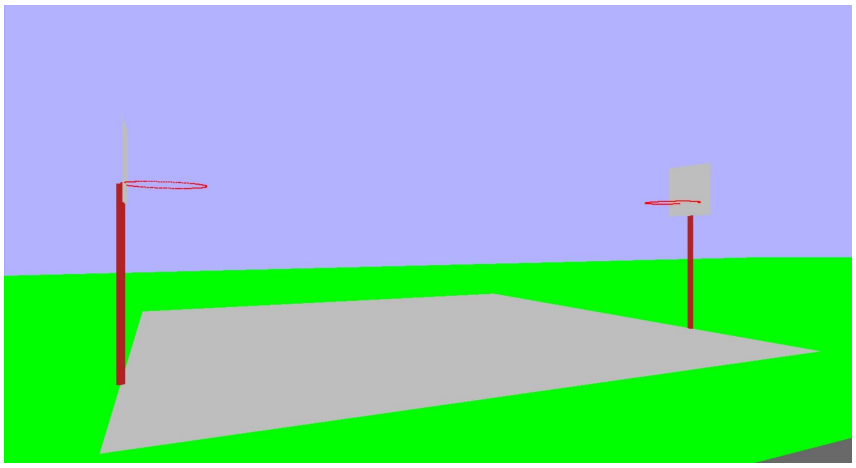
➢ First, create the layout plan as shown below.



➢ We require an open world without any objects at first.
➢ Later, impose boundaries on the player.
➢ Add color to the ground and sky.
➢ Now use some key bindings to move around the map by giving keys.
➢ Input keys for the application:
  - w - Move forward
  - s - Move Backward
  - u - Move vertically up
  - j - Move vertically down
  - Mouse left click and drag right -Rotate view towards right
  - Mouse left click and drag left -Rotate view towards left

➢ Create the roads, using the layout plan.
➢ After that, add the building and courts to the scene.

Results



Conclusion

To conclude, this project shows how computer graphics could simulate some pictures that can't be captured easily with the actual camera. By having objects and using some computer graphic techniques, The finished product reflects the campus we are trying to achieve.

Contributions

N NITISH REDDY - Input Keys, Academic Block, Roads and methodology

NITHIN DEV - Hostel, Mess buildings, Abstract and Introduction

JAYANTH B - Park, Arch and Layout diagram

SATHWIC M - Basketball, badminton court and conclusion

Signs of members